

## CLAIMS:

1. A lamp with
  - a lamp base (14),
  - and a burner (12) with a burner element (L),
  - wherein the burner (12) is fixedly fastened in the lamp base (14),
- 5 - and the lamp base (14) comprises position reference elements (22a, 22b, 22c) for positioning,
  - and wherein contact surfaces are formed at the position reference elements (22a, 22b, 22c) by machining or permanent deformation such that they have a given position with respect to the burner element (L).
- 10 2. A lamp as claimed in claim 1, wherein
  - the burner (12) is fastened in the lamp base (14) by means of injection molding, casting, adhesion, locking, or pressing.
- 15 3. A lamp as claimed in any one of the preceding claims, wherein
  - the burner element (L) is a discharge vessel in which a gas discharge can be excited between two electrodes.
- 20 4. A lamp as claimed in any one of the preceding claims, wherein
  - the lamp base (14) comprises a flange (18) from which the position reference elements (22a, 22b, 22c) project.
- 25 5. A headlight with
  - a lamp (10) as claimed in any one of the preceding claims,
  - and a reflector,
  - wherein the lamp (10) is mounted to the reflector such that the burner element (L) is inside the reflector,
  - and wherein the lamp (10) is positioned with reference to the reflector through contact at least with the contact surfaces of the position reference element (22a, 22b, 22c).

6. A method of manufacturing a lamp with a lamp base (14) comprising position reference elements (22a, 22b, 22c) and with a burner (12) comprising a burner element (L), wherein

- 5 - the burner (12) is fastened in the lamp base (14),  
- the position of the burner element (L) relative to the position reference elements (22a, 22b, 22c) is determined,  
- whereupon a machining operation or a permanent deformation is applied to the position reference elements (22a, 22b, 22c) such that contact surfaces are formed which define a given  
10 position with respect to the burner element (L).

7. A method as claimed in claim 6, wherein

- the contact surfaces at the position reference elements (22a, 22b, 22c) are formed by a bulk-removing treatment, for example milling or melting.

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8. A method as claimed in claim 6 or 7, wherein

- the burner (12) is indetachably fastened in the lamp base (14) without alignment possibility.